In the Specification

Please replace the paragraph beginning at page 1, line 5, with the following rewritten paragraph:

-- U.S. patent application ~~Serial No. 08/_____, assignee docket number END9-2000-0184,~~ Serial No. 09/76,179 entitled "SYSTEM AND METHOD FOR DETERMINING NETWORK DISCRETE UTILIZATION" filed concurrently herewith is assigned to the same assignee hereof and contains subject matter related to the subject matter of the present application. The above identified patent application is incorporated herein by reference.--.

Please replace the paragraph beginning at page 28, line 14, with the following rewritten paragraph:

-- An alternative method for calculating the network's streaming speed using the logical best burst is to compute the average packet receipt time (last bit receipt time minus first bit receipt time averaged for each packet in the logical best burst) and the average interpacket receipt time

gap (the "spacing" that the network imposes upon packets across this connection between individual packets). The bits per packet ~~(maximum MTU)~~ divided by the addition of gap time and packet receipt time will also give the network's streaming speed. ~~— Note: if the network is full duplex and if echo packets are used, then the calculation needs to be performed using the formula:~~

~~2* bits per packet/receipt time~~

~~where receipt time = gap time per packet plus first-to-last bit receipt time per packet.~~--.

After page 31, line 19, insert the following material:

-- Instances of frame discards may be accounted for in the following manner. Each discarded frame is considered an instance of one hundred percent network utilization. The successful transmissions result in a measure of discrete utilization based on the observed ratio of average network delay to the standard deviation of average network delay. In order to account for dropped frames (which have "infinite delay," and therefore cannot be used in the calculation of

the ratio), the dropped frames are accounted for not as instances of delays but as instances of 100 percent utilization that are averaged with the discrete utilization measure derived from successful transmissions.

For example, suppose a total of 100 sample frames are transmitted and that 5 sample frames are dropped. Suppose further that based upon the values of Tw and sigma Tw for the 95 successful transmissions, a network discrete utilization of 45% is determined. Since the 45% discrete utilization value does not take the discards into consideration, the 5 discards must also be considered. The following formula is used to derive the complete measure of discrete utilization (where all utilization measures are in decimal representation of percentage):

(percent successful transmissions * discrete utilization) + (percent drops * 1.0) = complete measure of network utilization.

In the example, the calculation would be:

(.95 * .45) + (.05 * 1.0) = .4215 + .05 = .4712 = 47.12% complete discrete utilization.

Thus, this method for calculation of the value of the network's discrete utilization involves the measurement of the network's average delay waiting for service, measurement of the network's standard deviation of delay waiting for service, calculation of discrete utilization from the ratio of these observed values, and then refinement of that calculation by proportionate factoring in instances of dropped samples as cases of one hundred percent utilization to arrive at a final figure for percent of network discrete utilization.

Network Streaming Speed (the rate at which a network is capable of streaming a user's traffic, end to end, when otherwise vacant of traffic)--

Formula:

network streaming speed = total bits in burst / total receipt time for burst

Average Network Streaming Speed (the speed at which the network is capable of streaming a user's traffic under current conditions, including the traffic of other users of

the network.)--

Formula:

average network streaming speed = total bits in burst / average total receipt time for burst

Network Streaming Utilization (the percent of the network currently in use that is not available to a user commencing use of an application that will stream traffic along the end to end network connection.)--

Formula:

network streaming utilization = (network streaming speed / average network streaming speed) * 100.

As noted above, this includes overhead incurred for retransmissions.

Network discrete utilization including dropped sample frames:

(percent successful transmissions * discrete

utilization) + (percent drops * 1.0) = network utilization including dropped frames

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Please replace the paragraph beginning at page 41, line 4, with the following rewritten paragraph:

--Standard Deviation Network Queue Wait Time, σTw, from a queueing theory perspective (the queueing theory formula for σTw):

Formula:

$$\sigma Tw = [\ddot{O}(p * (2 - p)\ )\ ] * (Ts / (1 - p))$$

In accordance with this embodiment of the invention, this formula is used in derivation of the value of a network's discrete utilization value. The specific formulas in which it is used are shown in the copending application, ~~S/N~~ Serial No. 09/76,179 entitled "SYSTEM AND METHOD FOR DETERMINING NETWORK DISCRETE UTILIZATION". The importance of this queuing theory formula is that it relates the empirically derived value for σTw to utilization and service

time values and, therefore, provides a necessary link between ANSAT testing methods and the derivation of discrete utilization and average network message length. --.